Exhibit A

P.R. 4-5 – Joint Claim Construction Chart

Exhibit A1: The Parties' Proposed Constructions for Terms in Dispute for U.S. Patent No. 7,664,059

Term (Patent/Claim)	Plaintiffs' Proposed Construction	Defendants' Proposed Construction	Court's Construction
"a sequence number following a sequence number of a last in-sequence acknowledged packet of a transmitter" '059 Patent, claims 1, 3, 8 Claim 1 is representative: A method of detecting an erroneous sequence number of a status report unit in a wireless communications system, the method comprising: receiving a status report unit output from a receiver of the wireless communications system; detecting whether a negatively acknowledged sequence number lies in a range of greater than or equal to **a sequence number following a sequence number of a last in-sequence acknowledged packet of a transmitter** and less than a sequence number of a next packet to be transmitted for the first time by the transmitter when the negatively	No construction necessary.	"a Sequence Number of a next expected acknowledged Protocol Data Unit (PDU), meaning the SN following an SN of a last in-sequence acknowledged PDU"	

Term (Patent/Claim)	Plaintiffs' Proposed Construction	Defendants' Proposed Construction	Court's Construction
acknowledged sequence number is detected in the status report unit; and detecting that the status report unit comprises an erroneous sequence number when the negatively			
"a sequence number of a next packet to be transmitted for the first time by the transmitter" '059 Patent, claims 1, 3, 8 Claim 1 is representative: A method of detecting an erroneous sequence number of a status report unit in a wireless communications system, the method comprising: receiving a status report unit output from a receiver of the wireless communications system; detecting whether a negatively acknowledged sequence number lies in a range of greater than or equal to a sequence number following a sequence number of a last in-sequence acknowledged packet of a transmitter and less than **a sequence number of a**	No construction necessary.	"a Sequence Number of a next Protocol Data Unit (PDU) to be transmitted for a first time (i.e. excluding retransmitted PDUs)"	

Term (Patent/Claim)	Plaintiffs' Proposed Construction	Defendants' Proposed Construction	Court's Construction
next packet to be transmitted for the first time by the transmitter when the negatively acknowledged sequence number is detected in the status report unit; and detecting that the status report unit comprises an erroneous sequence number when the negatively			
"status report unit" '059 Patent, claims 1, 2, 3, 4, 8 Claim 2 is representative: The method of claim 1 further comprising initiating a reset procedure when the **status report unit** comprises the erroneous sequence number.	"a data unit containing status report information"	"a status report comprising at least the sequence number of a PDU"	

Exhibit A2: The Parties' Proposed Constructions for Terms in Dispute for U.S. Patent No. 9,237,489

Term (Patent/Claim)	Plaintiffs' Proposed Construction	Defendants' Proposed Construction	Court's Construction
"User Equipment (UE)" / "UE" '489 Patent, claims 1, 2, 11, 12, 14, 22	AGREED	AGREED	No construction necessary
"eNB" '489 Patent, claims 1, 3-12, 14-22 Claim 1 is representative: A method of Secondary Cell (SCell) release during handover comprising: configuring at least one SCell by a source **eNB** to a User Equipment (UE); and including information by the source **eNB** in a Handover PreparationInformation message for a target **eNB** to control SCell release in the UE during a handover, wherein the information indicates SCell indexes of all SCells configured to the UE before the handover, thereby allowing the target **eNB** to include a sGellToReleaseList with all the SCells configured to the UE in a handover	"base station that has the capability of providing wireless communications to or from a user communication device" Or if claims are limited to 3GPP, "base station that has the capability of providing wireless communications to or from a user communication device via orthogonal division multiple access (OFDMA)"	"an E-UTRAN base station providing 4G/LTE cellular connectivity to the UE"	

Term (Patent/Claim)	Plaintiffs' Proposed Construction	Defendants' Proposed Construction	Court's Construction
command for the UE to release the SCells included in the SCellToReleaseList.			
"**RRCConnectionReconfiguration message**" '489 Patent, claims 2, 3, 11, 13, 14, 22 Claim 2 is representative: The method of claim 1, wherein the handover command corresponds to an **RRCConnectionReconfiguration** message including mobilityControlInfo.	No construction necessary. Alternatively, if the claim is limited to 3GPP, "RRCConnectionReconfiguration message in an orthogonal division multiple access (OFDMA) wireless system"	"RRCConnectionReconfiguration message as defined in 4G/LTE standard specification TS 36.331-940"	
"**mobilityControlInfo**" '489 Patent, claims 2, 13 Claim 2 is representative: The method of claim 1, wherein the handover command corresponds to an RRCConnectionReconfiguration message including **mobilityControlInfo**.	No construction necessary. Alternatively, if the claim is limited to 3GPP, "mobilityControlInfo" in a orthogonal division multiple access (OFDMA) wireless system"	"mobilityControlInfo as defined in 4G/LTE standard specification TS 36.331-940"	

Exhibit A3: The Parties' Proposed Constructions for Terms in Dispute for U.S. Patent No. 9,570,559

Term (Patent/Claim)	Plaintiffs' Proposed Construction	Defendants' Proposed Construction	Court's Construction
"User Equipment (UE)" / "UE" '559 Patent, claim 1, 2, 3, 7, 8, 10, 11	AGREED	AGREED	No construction necessary.
"A method for supporting dual connectivity . . ." '559 Patent, claim 1 Claim 1 is representative: **A method for supporting dual connectivity in a wireless communication system, wherein separate eNBs (evolved Node B) are used to support dual connectivity, comprising**: a first eNB controls a first cell, wherein the first cell is serving a UE (User Equipment); and the first eNB configures a second cell to serve the UE together with the first cell, wherein the second cell is controlled by a second eNB; the first eNB allocates a measurement gap configuration to the UE; and	No construction necessary.	Limiting. "A method for supporting dual connectivity in a wireless communication system, wherein separate eNBs (evolved Node B) are used to support dual connectivity, which is when a UE (User Equipment) is served by both a macro eNB and a small cell eNB, comprising"	

Term (Patent/Claim)	Plaintiffs' Proposed Construction	Defendants' Proposed Construction	Court's Construction
the first eNB sends the measurement gap configuration to the second eNB so that the second eNB could take measurement gaps into consideration when scheduling resources to the UE.			
"A method for supporting dual connectivity . . ." '559 Patent, claim 7 Claim 7 is representative: **A method for supporting dual connectivity in a wireless communication system, wherein separate eNBs (evolved Node B) are used to support dual connectivity and a UE (User Equipment) is served by a first cell controlled by a first eNB, comprising**: a second eNB controls a second cell, wherein the second cell is configured by the first eNB to serve the UE together with the first cell; and the second eNB receives a measurement gap configuration from the first eNB so that the second eNB could take measurement gaps into consideration when scheduling resources to the UE,	No construction necessary.	Limiting. "A method for supporting dual connectivity in a wireless communication system, wherein separate eNBs (evolved Node B) are used to support dual connectivity, which is when a UE (User Equipment) is served by both a macro eNB and a small cell eNB, and the UE is served by a first cell controlled by a first eNB, comprising"	

Term (Patent/Claim)	Plaintiffs' Proposed Construction	Defendants' Proposed Construction	Court's Construction
wherein the measurement gap configuration was allocated by the first eNB to the UE.			
"eNBs (evolved Node B)" '559 Patent, claims 1, 7 Claim 1 is representative: A method for supporting dual connectivity in a wireless communication system, wherein separate **eNBs (evolved Node B)** are used to support dual connectivity, comprising: a first **eNB** controls a first cell, wherein the first cell is serving a UE (User Equipment); and the first **eNB** configures a second cell to serve the UE together with the first cell, wherein the second cell is controlled by a second **eNB**; the first **eNB** allocates a measurement gap configuration to the UE; and the first **eNB** sends the measurement gap configuration to the second **eNB** so that the second **eNB** could take measurement	"base station that has the capability of providing wireless communications to or from a user communication device" Or if claims are limited to 3GPP wireless technology, "base station that has the capability of providing wireless communications to or from a user communication device via orthogonal division multiple access (OFDMA)"	"an E-UTRAN base station providing 4G/LTE cellular connectivity to the UE"	

Term (Patent/Claim)	Plaintiffs' Proposed Construction	Defendants' Proposed Construction	Court's Construction
gaps into consideration when scheduling resources to the UE.			
"**first eNB**" '559 Patent, claims 1, 3, 7, 11 Claim 3 is representative: The method of claim 1, wherein the second cell is configured to the UE via a Radio Resource Control (RRC) message (such as a RRC Connection Reconfiguration message) from the **first eNB**.	No construction necessary.	"macro eNB"	
"**second eNB**" '559 Patent, claims 1, 7, 8 Claim 8 is representative: The method of claim 7, further comprises: the **second eNB** takes the measurement gap configuration into consideration when scheduling resources to the UE.	No construction necessary.	"small cell eNB"	
[**Order of Operations**] '559 Patent, claims 1, 7 Claim 1 is representative: A method for supporting dual connectivity in a wireless	There is no order required for the recited method steps.	The steps of claims must be performed in the order listed in the claims.	

Term (Patent/Claim)	Plaintiffs' Proposed Construction	Defendants' Proposed Construction	Court's Construction
communication system, wherein separate eNBs (evolved Node B) are used to support dual connectivity, comprising: a first eNB controls a first cell, wherein the first cell is serving a UE (User Equipment); and the first eNB configures a second cell to serve the UE together with the first cell, wherein the second cell is controlled by a second eNB; the first eNB allocates a measurement gap configuration to the UE; and the first eNB sends the measurement gap configuration to the second eNB so that the second eNB could take measurement gaps into consideration when scheduling resources to the UE.			

Exhibit A4: The Parties' Proposed Constructions for Terms in Dispute for U.S. Patent No. 9,736,883

Term (Patent/Claim)	Plaintiffs' Proposed Construction	Defendants' Proposed Construction	Court's Construction
"User Equipment (UE)" / "UE"	AGREED	AGREED	No construction necessary
"eNB" and **"evolved Node B"** '883 Patent, claims 1, 2, 4-11 Claim 1 is representative: A method for handling inter-node connectivity in a wireless communication system, comprising: receiving, by a first **evolved node B (eNB)**, a first request from a second **eNB** for aggregating a Secondary Cell (SCell) for a User Equipment (UE); transmitting an accept message from the first **eNB** to the second **eNB** in response to the first request; and transmitting a second request from the first **eNB**, which controls the SCell of the UE, to the second **eNB**, which controls a Primary Cell (PCell) of the UE, to change a data path for a first radio bearer of the UE, wherein the second request does not	"base station that has the capability of providing wireless communications to or from a user communication device" Or if claims are limited to 3GPP, "base station that has the capability of providing wireless communications to or from a user communication device via orthogonal division multiple access (OFDMA)"	"an E-UTRAN base station providing 4G/LTE cellular connectivity to the UE"	

Term (Patent/Claim)	Plaintiffs' Proposed Construction	Defendants' Proposed Construction	Court's Construction
indicate to change the data path for a third radio bearer of the UE; wherein a first path is via the first **eNB** and used as the data path for the first radio bearer and the third radio bearer before changing the data path for the first radio bearer.			
"first evolved node B (eNB)" / "first eNB" '883 Patent, claims 1, 5-7, 9, 11 Claim 5 is representative: The method of claim 1, further comprising: receiving, by the **first eNB**, a confirmation message from the second eNB for changing the data path for the first radio bearer.	No construction necessary.	"a first E-UTRAN base station providing 4G/LTE cellular connectivity to the UE"	
"second evolved Node B (eNB)" / "second eNB" '883 Patent, claims 1, 2, 5, 7, 8, 9 Claim 5 is representative: The method of claim 1, further comprising: receiving, by the first eNB, a confirmation message	No construction necessary.	"a second E-UTRAN base station providing 4G/LTE cellular connectivity to the UE"	

Term (Patent/Claim)	Plaintiffs' Proposed Construction	Defendants' Proposed Construction	Court's Construction
from the **second eNB** for changing the data path for the first radio bearer.			
"the UE has multiple paths via different eNBs" '883 Patent, claims 4, 10 Claim 4 is representative: The method of claim 1, wherein the UE has **multiple paths via different eNBs** after the data path for the first radio bearer change.	No construction necessary.	Indefinite.	
"Secondary Cell" / "SCell" '883 Patent, claims 1, 7 Claim 1 is representative: A method for handling inter-node connectivity in a wireless communication system, comprising: receiving, by a first evolved node B (eNB), a first request from a second eNB for aggregating a **Secondary Cell (SCell)** for a User Equipment (UE);	No construction necessary.	"'Secondary Cell' as defined in 4G/LTE standard specification TS 36.331 v11.2.0"	

Term (Patent/Claim)	Plaintiffs' Proposed Construction	Defendants' Proposed Construction	Court's Construction
transmitting an accept message from the first eNB to the second eNB in response to the first request; and transmitting a second request from the first eNB, which controls the **SCell** of the UE, to the second eNB, which controls a Primary Cell (PCell) of the UE, to change a data path for a first radio bearer of the UE, wherein the second request does not indicate to change the data path for a third radio bearer of the UE; wherein a first path is via the first eNB and used as the data path for the first radio bearer and the third radio bearer before changing the data path for the first radio bearer.			
"Primary Cell" / "PCell" '883 Patent, claims 1, 7 Claim 1 is representative: A method for handling inter-node connectivity in a wireless communication system, comprising: receiving, by a first evolved node B (eNB), a first request from a second eNB	No construction necessary.	"'Primary Cell' as defined in 4G/LTE standard specification TS 36.331 v11.2.0"	

Term (Patent/Claim)	Plaintiffs' Proposed Construction	Defendants' Proposed Construction	Court's Construction
for aggregating a Secondary Cell (SCell) for a User Equipment (UE); transmitting an accept message from the first eNB to the second eNB in response to the first request; and transmitting a second request from the first eNB, which controls the SCell of the UE, to the second eNB, which controls a **Primary Cell (PCell)** of the UE, to change a data path for a first radio bearer of the UE, wherein the second request does not indicate to change the data path for a third radio bearer of the UE; wherein a first path is via the first eNB and used as the data path for the first radio bearer and the third radio bearer before changing the data path for the first radio bearer.			
"data path for a first radio bearer"/ "data path for a second radio bearer" / "data path for a third radio bearer" '883 Patent, claims 1-4, 7-10 Claims 1 and 2 are representative	No construction necessary.	Indefinite.	

Term (Patent/Claim)	Plaintiffs' Proposed Construction	Defendants' Proposed Construction	Court's Construction
Claim 1: A method for handling inter-node connectivity in a wireless communication system, comprising: receiving, by a first evolved node B (eNB), a first request from a second eNB for aggregating a Secondary Cell (SCell) for a User Equipment (UE); transmitting an accept message from the first eNB to the second eNB in response to the first request; and transmitting a second request from the first eNB, which controls the SCell of the UE, to the second eNB, which controls a Primary Cell (PCell) of the UE, to change a **data path for a first radio bearer** of the UE, wherein the second request does not indicate to change the **data path for a third radio bearer** of the UE; wherein a first path is via the first eNB and used as **the data path for the first radio bearer and the third radio bearer** before changing the **data path for the first radio bearer**. Claim 2: The method of claim 1, wherein the **data path for the first radio bearer**			

Term (Patent/Claim)	Plaintiffs' Proposed Construction	Defendants' Proposed Construction	Court's Construction
is changed to a second path, wherein the second path is via the second eNB and used as a **data path for a second radio bearer** of the UE.			